# The Impact of Retail Ready Packaging on FMCG Supply Chain Members

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**ABSTRACT**

**Introduction**: Retail Ready Packaging, as the secondary transport packaging which quickly and easy convert in display tray, is most used among fast moving consumer goods, which have the highest turnover and require the most often shelf replenishment. Conceived by retailers to improve in-store operations, RRP mostly benefits to retailers and these benefits are quite well known. But RRP implementation affects as well other members of supply chain, therefore holistically approach is necessary, especially during the RRP design, in order to achieve the highest possible effectiveness.

**Method**: Through SWOT analysis for different supply chain members, Retail Ready Packaging's impacts will be summarized and categorized.

**Results and discussion:** SWOT analysis for each SC member regarding RRP use has shown few important primarily logistical aspects to take into consideration that were not considered from retail point of view. Also, research has shown some opportunities for improvement of RRP use on all SC levels.

**KEYWORDS**

*Retail ready packaging; FMCG supply chain; supply chain members; relationships in supply chain.*

## 1. INTRODUCTION

Every business activity nowadays demands constant changes and improvements in order to stay competitive and fulfil all the expectations of stakeholders. Supply chain (SC), as a network that encompasses a lot of business activities on different levels, is very receptive to the slightest change. This is a reason why every SC change should be widely considered from various points of view. All members of SC should upgrade their business in a manner to create better results for the whole SC, and at the same time for themselves.

To make activities as effective as they can be, it is necessary that long-term sustainable SCM is based on an equitable distribution of savings and other benefits that are achieved through collaboration in the supply chain (Dujak et.al, 2014.).

Even though retailers used to be passive receivers of products assigned by manufacturers, today in many supply chains, retailers are the active designers and controllers of product supply in reaction to known customer demand. They control, organize and manage the supply chain from production to consumption (Fernie, Sparks, 2009, p. 9), especially food and/or fast moving consumer goods (FMCG) retailers.

By food retailers' strengthening, mostly due to their activities of mergers and acquisitions resulting in growing concentration, they have changed their role in SC and became most proactive and dominant member. Because of the fact that retailers introduced through the decades many supply chain innovations and tools, in order to primarily achieve better outcomes for themselves, the term for the supply chain driven by retailers has occurred as retail supply chain management (RSCM) (Alagiri & Selvan, 2007; Ayers & Odegaard, 2008; Finne, & Sivonen, 2009; Gustafsson et al., 2009; Ray, 2010).

Some of those innovations through the years are regional distribution centres in 1960s and 1970s, outsourcing of transport activities, development of reusable transit packaging, conversion of storage area in sales area in 1980s, cross-docking, in-store Internet delivery, Efficient Consumer Response (ECR) development, factory gate pricing in 1990s and 2000s (Gustafsson et al, 2009, p. 45). In recent years, RSCM field of packaging in particularly is witnessing successful use of roll containers, rigid plastic packaging, retail ready packaging, one touch packaging or "forkable" display units (Dujak et. al, 2014). In order to achieve full effect of implementation, all innovations and tools above should contribute to the supply chain in a whole, not only for retailers.

Since every improvement demands certain investment, so does the retail ready packaging. In SC this investment, in a costly manner, mostly affects manufacturers, while on the other hand retailers enjoy the most

benefits through in-store cost reductions. Most papers deal with individual SC members, mostly retailers. Other members are usually less mentioned when it comes to retail ready packaging, but they are as well affected by its implementation.
The goal of this paper is to investigate and present impact of Retail Ready Packaging (RRP) on FMCG's SC members. RRP's impacts will be summarized and categorized through SWOT analysis for each SC member.

## 2. LITERATURE REVIEW

### 2.1. Retail Ready Packaging

Although the use of RRP is quite widespread, the terminology and definition are still developing. According to Shrijver (2013,p.6.) RRP is a secondary packaging where the actual products are being shipped in from the manufacturer to the retailer. But as the secondary, transit packaging, RRP is designed not only for transportation purposes, but also to ease and facilitate the process of in-store replenishment (supply chain function) and benefits all supply chain members (marketing function) (Dujak et.al, 2014), enhancing the shopping experience for the consumer (Pira International, 2011).
As RRP's most important function is to facilitate shelf replenishment, it is occasionally identified with Shelf Ready Packaging (SRP), but actually it is a broader concept which includes packaging as shelf ready, display ready, replenishment ready, infrastructure ready or shopper ready (IGD Supply Chain Analysis, 2011; Korzeniowski, 2009).
In 2005 The Institute of Grocery Distribution and Efficient Consumer Europe UK proposed that "shelf ready packaging" should be used as a term for a product that comes ready-merchandised and that can be placed directly on to a shelf. "Retail ready packaging" is their term for additional aspects of easy identification and easy packaging opening, but where the outer case is moved direct to the shelf following "one-touch replenishment" principles (Gustaffson et al, 2009, p. 210).
To understand the essential reasons of RRP occurrence, it is necessary to state main advantages expected and delivered from RRP.
The most significant cost that RRP contributed to be reduced is shelf replenishment cost, which demands labour's time. The in-store labour cost during shelf replenishment is one of the main reasons, along with traditionally smaller stores (Dujak et al., 2014), why retail ready packaging first occurred in Europe, where the labour costs are higher than on the other continents, especially compared to northern and north western Europe. It is not surprising that discounters, whose sales policy is based on low prices, were the first who introduced RRP on their shelves. According to some sources (Creevy, 2010), German hard discounter Aldi is recognized as a pioneer of RRP. In the beginning, products were stacked in the store in the same condition as they arrived, with minimal handling and using transport form, pallets or boxes, as display units in their stores, mostly on floors. The Institute of Grocery Distribution (IGD) sees UK retailer Tesco as the pioneer in using RRP because of the organized RRP meetings with their suppliers.
Products with the highest turnover on the retailers' shelves are fast moving consumer goods (FMCG) or consumer packed goods (CPG). As a consequence, most of *out-of-stock* situations occur on the shelves with relatively low valued and daily used products. Large stocks in store's warehouses are not preferred by retailers, as a logical part of cost-reducing strategies, but often they are not even possible. One of the objectives of FMCG products is to be available in as many stores as possible, including the small neighbourhood stores with even smaller backrooms. This especially relates to groceries, therefore it is interesting that in 2010 majority of RRPs are mostly used for food products (nearly 78%) and beverages (16%), and non-foods counts for only 6% (Pira International, 2012). All of the above demands appropriate small packaging which will fit in different sized stores and RRP corresponds to that demand.
Private label or store brands products, significantly present at hard discounters, are most common in FMCG and they could be credited for retail ready packaging as we know it today. They were traditionally defined as a generic product offerings that competed with national brand products by using lower prices. Even though private label in the beginning was perceived as less quality, less trust and less confidence, retailers continued to push more private label products into different categories because they provide high margins and the promise of profitability with little to no marketing effort (Mullick-Kanwar, 2014). One of the ways to additionally decrease their prices was to improve traditional secondary packaging, in order to reduce the in-store replenishment activities that are always carried out by retailers' employees when it comes to private label.
The growth of private label products use nowadays, along with the increased effort in their visual identity, can be greatly attributed to global recession when buyers are more financially sensitive and therefore more willing to try lower-valued alternatives to their favourite products. In 2011, private-label products account for roughly 16 percent of global fast-moving consumer goods dollar share (Nielsen Global Private Label Report, 2012). However, the perception of products in RRP in consumer mind is no more identified only with private label products, yet it is well accepted as a secondary packaging of brand products, which will be more discussed later in heading 3.5.
First Retail Ready Packaging Toolkit by Efficient Consumer Response (ECR) was published in 2006. This Toolkit states five RRP functional requirements (ECR Europe, 2006, p. 15):

- Easy Identification is very important and necessary throughout whole supply chain, from supplier's and manufacturer's warehouse to transport and retailer's backroom and shelf. RRP should contain clear and concise information, both for supply chain echelons and final buyer (The Kroger Co., Shelf Ready Guidelines, 2010, p. 9-10). Easy identification is mostly expressed through information about products in packaging (through some version of barcode), but also through colouring of packaging in a way that enhance brand awareness and recognition.
- Easy Opening should enable one-touch opening and contribute to more efficient shelf replenishment process. Simple and understandable instructions, quality material and production are the keys of easy opening effectiveness (The Kroger Co., Shelf Ready Guidelines, 2010, p. 9-10). All this is done without necessary additional and potentially harmful (for product and/or worker) opening tools like scalpel or opening knife.
- Easy Dispose is unavoidable in nowadays modern business. RRP materials should be easily separated and stacked with appropriate recycling information. Also, ease of disposal is vital to keep aisles free and open to support the shopping experience for the consumer (ECR Europe, 2006, p. 19).
- Easy Shelf is quite connected with requirement of easy opening because both are part of replenishment process. One-move replenishment is necessity in replenishment acceleration, accompanied with appropriate RRP weight, dimensions and stability to ease the process even more and make the shelf more visually attractive and neat (ECR Europe, 2006, p. 18).
- Easy Shop should improve the customers experience of identifying the brand and variety, product remove and return without barriers (The Kroger Co., Shelf Ready Guidelines, 2010, p. 15-16). On shelf availability is a great advantage that comes with RRP and allows a customer to avoid unpleasant experience of out of stock situations.

All requirements above mostly refer to the in-store activities, but the background of RRP requirements in SC is much wider.

## 3. RETAIL READY PACKAGING AND SUPPLY CHAIN MEMBERS

In this paper into consideration will not be taken all SC members (e.g. raw material supplier) but the ones that RRP affects the most and these are packaging suppliers who finalize the RRP, manufacturers, wholesalers, distributors and third-party logistics as intermediaries, retailers and final customers.

In order to achieve optimal effectiveness of RRP, collaboration between SC members, in different phases of RRP creation and use, is necessary. Certain observers of or participants in the value chain are beginning to say that effective RRP initiatives that bring benefits to all are not that easy to come by (Reynolds, 2014). Considering that RRP passes through the distribution chain, it is extremely important that all needs and requirements of every echelon, from manufacturer downstream, are taken into consideration, that it is approached holistically. Only that way packaging supplier can produce packaging that will contribute to all members, including the packaging supplier himself.

Shelf dimensions, rate of sale, automated warehouse systems, and distance travelled all can have an impact on how successful any RRP is, even that how it will look as it sells down, with fewer packages on the shelf (Romanik, 2013).

That the implementation of RRP in supply chain is very complex, confirms lead packaging services provider (LPSP) concept, which is offered from third-party logistics and it can help by making sure that a packaging design will meet customers' requirements, and by determining how the changes will affect current packaging equipment, pallet optimization, automated warehouse systems, and other factors (DHL, 2014).

To avoid the possibility of the situation in the store where the time of shelving RRP even extends over time needed for shelving traditional packaging (Fisher & Raman, 2010, p. 136), as well other expected positive impacts of RRP to be reduced, it is crucial that packaging designers are, for example, directly (first-hand) acquainted with the store operations of employees who will stack goods on the shelves or on stores' floor (Dujak et.al., 2014)., but also with the operations of distributors in warehouse such as picking and packaging for transport (e.g. wrapping, or stocking), as well as manufacturer's operation during production, palletizing and warehousing.

Retailers, as the main RRP proponents, usually present to other supply chain members RRP benefits as the opportunity to achieve everlasting major goal – sales increase through its better visibility and higher on-shelf availability. This initiative can be expressed directly by retailers, who receive the greatest benefits, or indirectly through necessity encouraged from competition and growing efficiency of their supply chains as result of RRP implementation. Despite, sometimes other members are reluctant to implement RRP, mostly because of the lack of fair distribution of advantages from its use, what is the prominent issue by food manufacturers in Europe and USA (Arzoumanian, 2011).

Five easy of RRP benefit to some extent to every supply chain member, but primarily to retailer - especially during in-store operations (Figure 1). Although not significantly different than in case of traditional transit packaging, easy identification benefits as well from the supplier's warehouse and through the whole distribution chain. It is best expressed when it comes to the final customer in the store, because together with easy shop, RRP enhance noticeability of product that result in increased sale and facilitates the shopping

experience for the customer. Due to easy identification, the organization in place and later finding of the products is improved through the SC. As smaller packaging, RRP could enable easier picking and moving, especially in the store where due to its size and design accelerates the shelf arrangement and replenishment, (as easy shelf requirement) and waste disposal (as easy dispose requirement).

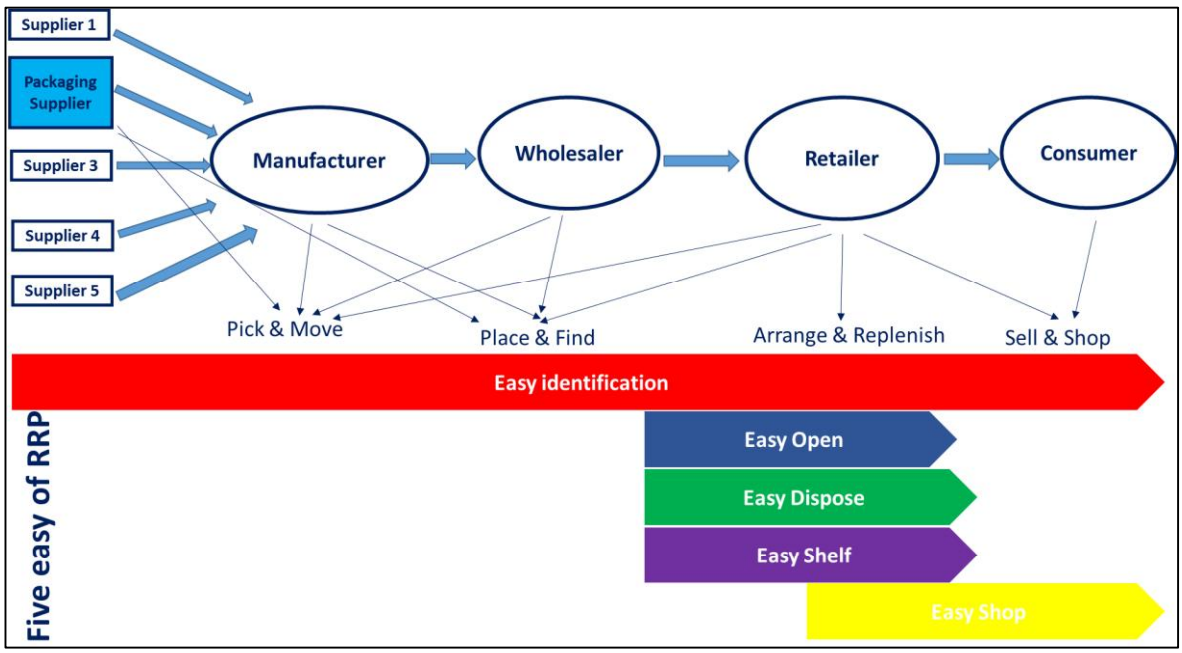


**Figure 1.** Five easy of RRP and SC members, source: authors adjusted according to (ECR Europe, 2006).

There is an example in Hormel Foods of successful collaborative effort among corrugated supplier and manufacturers' plant, operations, purchasing and R&D packaging departments, where RRP was designed carefully and specifically to function optimally from point of manufacture to the moment when the consumer picks a primary package or two from the attractive red display tray. The price of that case is slightly higher than a standard box due to the extra manufacturing process of combining the top and bottom together at corrugated manufacturer (Reynolds, 2014).

To summarize RRP strengths, weaknesses, opportunities and threats for each SC member, separate SWOT analysis for each involved SC member has been conducted. SWOT analysis has been conducted based on comparative analysis of our previous primary research (Dujak et al, 2014) and other RRP research in scientific literature.

### 3.1. Manufacturer's packaging suppliers

With the occurrence or RRP, packaging suppliers no longer produce only different sized white and brown carton boxes. Those unified boxes have been replaced by branded boxes with special requirements and with that comes to the fore know-how and willingness for development of packaging suppliers, as well the ability for quick investment in equipment. This is always easier with back up of the downstream SC members.

Design or RRP is very marketing driven, sometimes even guided with irrational demands of creative marketing people. One of the main challenges of packaging suppliers is to draw attention during RRP creation to the importance of functional requirements and perforations, because the type of perforation affects the ease of tearing, and the design and placement of a tear-off part will affect the strength of the package (Romanik, 2013). This way packaging suppliers will keep their integrity and prevent bad functional design of RRP, thus potential problems later in the supply chain (Table 1).

As well, the pressure on packaging suppliers to low the costs is always present, but in that one should be cautious and recognize the limits in order to keep the required quality. Reducing material thickness cuts costs, but a common pitfall is not having heavy enough carton weight or strong enough seals to hold the contents securely during shipping (Romanik, 2013). Therefore, the trust between packaging suppliers and manufacturers or retailers (mostly regarding expertise level and information confidentiality) is very important. As always, trust is built through collaboration, joint innovations and most importantly - sales increase. Otherwise, the packaging suppliers are to some extent the most easily replaceable SC members.

**Table 1.** Swot analysis of packaging suppliers regarding RRP use

| **Strengths** | **Weaknesses** |
|---|---|
| - large competitive advantage in the market with experience and know-how in RRP | - lack of flexibility for clients request<br>- RRP innovations can be imitated by competitors |
| **Opportunities** | **Threats** |
| - accelerated packaging innovations through collaboration with other supply chain members<br>- improved relationships with suppliers (e.g. glue)<br>- investment in equipment<br>- more RRP business<br>- continued strengthening of environmental awareness | - slowed progress of RRP implementation<br>- ever-changing needs of customers demand constant investment<br>- lack of standardization or just for a short period of time<br>- bad design by the manufacturer/retailer which distorts reputation as producer |

Source: authors

### 3.2. Manufacturers

According to research conducted in 2006 in United Kingdom, where the penetration of RRP is one of the highest, nearly fifty percent of manufacturers fail to cover costs of RRP. Nevertheless, they continue to use RRP in order to "remain competitive and maintain good customer relationships" (Food Manufacture, 2006). The same problem occurs also in North America, where RRP came from Europe. In 2009 RRP was rather encouraged by Canadian and U.S. retailers, but many CPGs, especially their manufacturers, found it difficult to find reasonable ROIs (Reynolds, 2014).

It is very important to be careful about costs in designing for RRP, because often there are various expectations and goals among purchasing and marketing department, as well the production unit. RRP is highly marketing driven, so creativity in graphic design tends to trump functionality, therefore is necessary collaborative approach of marketing and production to design a functional package that is both eye-catching and easily automated (Romanik, 2013). Investment in packaging line equipment is necessary in many cases for preparation and starting of RRP implementation (Dujak et al., 2014). But once it is made, marketing department should be aware of those limitations, at least for some time.

One of the aggravating circumstances when it comes to RRP graphic design is to stay consistent to brand's colour and identity. Most companies aim to consistent brand image that leaves recognizable impression in every situation. Hence, there is certain kind of challenge to achieve acceptable appearance of RRP, for example, by selected colour shade that always looks slightly different on corrugated board on RRP and plastic foil of primary product (Table 2).

According to recent research in food manufacturing industry (Dujak et al, 2014), most important advantages of RRP for food manufacturers are better shelf visibility and better shelf "position keeping", both increasing product visibility on the shlef, as well improved product image and relations with current and potential retailers (Table 2).

**Table 2.** Swot analysis of manufacturer regarding RRP use

| **Strengths** | **Weaknesses** |
|---|---|
| - greater product visibility on shelf<br>- better product image on the market<br>- decreased shelf replenishment time carried out by own employees<br>- increase in sales (sell-out traffic) increases revenue and better use of economies of scale<br>-customers' preference regarding RRP | - increase of the packaging cost<br>- packaging machinery line issue<br>- poor coverage of investment<br>- acceptance of agreements that can't be produced profitably<br>- opposite goals of purchasing and marketing departments |
| **Opportunities** | **Threats** |
| - availability in a larger number of (smaller) stores<br>- better relations with retailers<br>- easier starting of cooperation with new retailers<br>- less shelf out-of-stock situation<br>- better competitiveness | - lack of fair distribution of advantages from RRP use<br>- lack of fair distribution of RRP costs<br>- constant innovations from competition |

Source: authors

### 3.3. Wholesalers/Distributors/3PL

Although it may appear that RRP is usually well adjusted with its' size and shape for transport and handling, the problems may occur in the case of modular packaging approach, where is present the lack of standardization and needs of changing marketplace come ahead of logistics needs. But shipability goes yet beyond on the size and shape of packaging and should also include the product's ability to survive the supply chain (Lindgren, 2014). The perforations that exist on most RRP designs, with the purpose of easier opening,

to some extent attenuate the endurance of the RRP as transit packaging. Of course, it is not the case for individual full RRP, but in the warehouses, especially at wholesalers and distributors, full pallets stay for certain time and their endurance is tested. Likewise, in order to reduce transportation costs, often transporter in agreement with responsible party, arrange two or even more rows of pallets (in many occasion less than full pallets) in the vehicles or containers, one pallet directly putted on the other one. In situations like this, the robustness and quality of the material and design of the RRP are of the crucial importance to avoid product damages (Table 3).

If the retailer or manufacturer sets a hard count for the number of consumer units in the RRP, in order to maximize their shelf space or adapt to their plant's packaging line, it is possible to miss out on opportunities to improve shipping efficiencies and pallet utilization (Reynolds, 2014) and this way increase the transport and stock costs and low the effectiveness of RRP and efficiency throughout the whole supply chain.

**Table 3.** Swot analysis of SC intermediaries regarding RRP use

| | |
|---|---|
| **Strengths**<br>- better utilization of the maximum weight in transport<br>- reduced per-unit freight costs | **Weaknesses**<br>- lower pallet utilization due to modular RRPs<br>- slower commissioning due to lack of standardization |
| **Opportunities**<br>- increase of needed logistics services due to decrease in inventories at retailers | **Threats**<br>- irrational demands from manufacturer or retailer<br>- inadequate RRP design for logistics activities |

Source: authors

In many cases, although it should be equally or even more robust, RRP is of smaller size and lighter weight than traditional packaging, what causes less material needed to manufacture it, as well as easier manipulation during manual handling of goods and better transport utilization. According to one of the largest third-party logistics companies, reducing the size and weight of a package allows the shipper to load more product onto a vehicle or in a container, which can considerably reduce per-unit freight costs and if the volume is great enough, even an apparently insignificant reduction can have a big impact. There is example of reduced size of packaging for a prepared food product by just one-eighth of an inch that led to over US $600,000 in annual freight savings and as ecological benefit it eliminated 100 tons of carbon dioxide emissions and 146 tons of paper and cardboard annually (DHL, 2014).

### 3.4. Retailers

Even though retailers enjoy mostly positive impact of RRP, there are situations where they don't succeed to take only best of it. According to packaging engineer T. Ciecorka, U.S. retailer Kroger was moving ahead with its store brands until they found out the cost whereupon they have slowed progress and are looking at only certain items. Similar happens at Walmart, which is trying to go ahead in the U.S., but many store managers are pushing back, and some in Walmart do not see the savings in the U.S. (Reynolds, 2014). Here comes to the fore the difference among labour cost in Europe and U.S.A., as well the size of the stores and advantages of RRP regarding that issue.

Although easier and quicker shelf-replenishment is one of the most important and significant RRP benefits for retailer, RRP also reduces the need for more often product on shelf stacking - by facing them up in order the shelf looks more orderly and product more visible.

Every RRP does not correspond for the retailer. There are forms which have been working better for retailer (Romanik, 2013), and that should be clearly communicated upstream the supply chain if it reduces the potential sales.

**Table 4.** Swot analysis of retailer regarding RRP use

| | |
|---|---|
| **Strengths**<br>- easier and quicker shelf-replenishment<br>- reduced product waste<br>- increased sale (sell-out traffic)<br>- less product damages through case cutting<br>- increased speed in building promotional displays | **Weaknesses**<br>- increase of the packaging cost when it comes to private label<br>- less effective RRP forms |
| **Opportunities**<br>- using its power in SC to increase the percentage of RRP use in assortment<br>- greater environmental benefits through growing use of reusable RRP solutions | **Threats**<br>- the reluctance of manufacturers to RRP implementation |

Source: authors

### 3.5. Customers

Visual presentation of RRP is of exceptional importance to draw attention of the customers in the store – not only to ease their quest for product they are looking for, but also to facilitate impulse buying. Improved brand recall and awareness can be achieved through larger surface of packaging that is exposed to the views of customers in the store making it more noticeable (Dujak et.al, 2014). Even as it sells down and there are few products in the RRP, it is easier to find them due to the brand message. But as important is that the customer can remove the primary product package from the RRP easily, safely and comfortably (Romanik, 2013), both the full and half empty RRP. Using RRP, out-of-stock (OOS) situations, for the customers always unpleasant, are reduced due to accelerated shelf-replenishment, but even if they occur, RRP remains on the shelf, sending brand message.

**Table 5.** Swot analysis of customer regarding RRP use

| | |
|---|---|
| **Strengths**<br>- facilitated finding of the desired product<br>- improved on-shelf-availability<br>- preference to this kind of packaging | **Weaknesses**<br>- increase of impulse purchase |
| **Opportunities**<br>- even in case of OOS, branded RRP stays on shelf | **Threats**<br>- higher final price through growing costs |

Source: authors

Considerable advantage of RRP today is also the fact that most customers prefer it. In the beginning of its introduction in FMCG sector RRP was very much identified with private labels from discount stores. As customers were perceiving private labels as products of lower quality and value, this was reflected to products with RRP as well. Today, RRP is present in almost all retail forms of FMCG sector and used by majority of manufacturers of branded products. As a result, according to Korzeniowski (2009), most of consumers prefer RRP packaging. In the comparison with primary individual packaging, consumers in retail stores emphasize better design and features that make it easier to find a product on a shelf, as well as presenting a product in a way that is not creating any barriers while purchasing item.

## 4. CONCLUSION

RRP has found its place in retail stores of FMCG sector in the whole world. Its share in assortment is growing at a CAGR (Compound Annual Growth Rate) of 3.57 percent over the period 2013-2018 (Infiniti Research Limited, 2014). Other study (PMMI, 2014) reveals something slower growth in Europe (1,3 %) and North America, than in Asia (6,2%) and Africa (4,7%). This growth is largely emphasized by large retailers, who, in their insisting on the RRP, do not consider (or not enough) requirements of the entire supply chain through which the RRP passes. Through SWOT analysis for each FMCG's SC member who is in touch with RRP, this paper has presented main problems and opportunities for improvement of RRP implementation and use. Only by taking account of all requirements in SC, RRP could result in long-term sustainable win-win situation for all SC members.

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